

AMENDMENTS TO THE SPECIFICATION:

Page 1, please amend the paragraph beginning at line 9 as follows:

The present invention relates to a substrate, optical fiber connecting terminal member, optical element housing member, and method of fabrication of an optical module and the substrate, and in particular to a substrate, an optical fiber connecting end member, and an optical element housing member that can connect without alignment of the cores and at high precision an optical element mounted on an optical waveguide on a substrate or mounted on the substrate to an optical fiber of an optical fiber connector that is connected to an optical fiber connecting end member or an optical element provided on an optical element housing member, and member, and a fabrication method for an optical module and a substrate.

Page 7, please amend the paragraph beginning at line 7 as follows:

In a sixth aspect of the present invention, in an optical fiber connecting end member having formed therein a hole for accommodating and fixing one end of the substrate and optically connecting the substrate to the optical fiber, an optical fiber connecting end member is characterized in steps for positioning the substrate being formed on the substrate in the hole.

Page 12, please amend the paragraph beginning at line 13 as follows:

Fig. 3 is an exploded perspective drawing showing the optical module according to the second embodiment of the present invention, and the point of difference between the optical module according to this embodiment and the optical module according to the first embodiment described above is that, in contrast with the first embodiment in which there is

only a structure in which a silicon optical waveguide 4 is formed such that the optical waveguide substrate 1 has a plurality of cores 4a buried in a clad 4b on the Si substrate 3, in the optical module according to the present embodiment, a semiconductor laser (optical element) 21 for inputting a laser beam into the optical waveguide 4 is mounted on the Si substrate 3, thereby making a hybrid light condensing module.

Page 16, please amend the paragraph beginning at line 8 as follows:

In the second embodiment described above, the end face 11a of the optical fiber connecting end member 2 must be ground while the semiconductor laser 21 is mounted on the optical waveguide substrate 1, but in the present embodiment, the semiconductor laser 21 can be assembled after grinding the end surface 11a of the optical fiber connecting end member 2 beforehand. Therefore, this structure is effective in the case the optical elements such as the mounted semiconductor laser 21 should not be subject to vibration during grinding.

Page 18, please amend the paragraph beginning at line 13 as follows:

Fig. 8 is an exploded perspective drawing showing an optical module according to the seventh embodiment of the present invention, and Fig. 9 is an enlarged perspective drawing showing the Si ~~sum-mount~~sub-mount of the optical module. In the optical module according to the present embodiment, the semiconductor laser 21 and the plane light receiving type light receiving element 58 are mounted on the Si sub-mount 61 without alignment and at high precision by self-alignment.

Page 20, please amend the paragraph beginning at line 8 as follows:

The semiconductor laser 21 is mounted on the first Si sub-mount 31a, and the plane light receiving type light receiving element ~~64-69~~ is mounted on the second Si sub-mount 31. A V-shaped groove mirror ~~66-67~~ is formed below the light receiving element ~~64~~. ~~In~~ 69. In addition, a flat spring 76 is provided between the two Si sub-mounts 31a and 31b.

Page 20, please amend the paragraph beginning at line 15 as follows:

In this manner, by separating the semiconductor laser 21 and the Si sub-mount on which the light receiving element ~~64-69~~ is mounted, the gap of the guide pin insertion hole 12 becomes narrow, and compared to the case where the Si sub-mount 31 is disposed between the two guide pin insertion holes 12, there is extra free mounting surface. In addition, the electrical cross-talk that occurs between the semiconductor laser 21 and the signal lines of the light receiving element ~~64-69~~ is attenuated.

Page 22, please amend the paragraph beginning at line 2 as follows:

Fig. 14 is a process diagram showing the fabrication method of the optical module according to a tenth embodiment of the present invention. First, as shown in Fig. 14A, an optical waveguide layer 92 comprising silicon is formed on the Si substrate 91. Here, the thickness of the Si substrate ~~9-91~~ is 0.8 mm, and on this Si substrate 91, the optical waveguide layer 92 is deposited by chemical vapor phase deposition (CVD). In addition, the cross-sectional angle of the cores 4a of the optical waveguide is a 5 μm , and the thickness of the clad 4b above and below the cores 4a is 15 μm . The gap between cores 4a is, for example, 250 μm , and 12 cores 4a are formed on one optical waveguide substrate.